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ABSTRACT

The proposal in this document is based on the assumption that learning to learn is the most important outcome of professional and all formal education. It is suggested that a primary task of instruction is to assist the student to move from external motivation to internal motivation for learning and continuing to learn. It is proposed that these outcomes can best be facilitated by making two reforms in student evaluation procedures: (1) changing to a pass/no pass system of grading and (2) using criterion-referenced instruments, as opposed to norm-referenced instruments, as a basis for evaluation. An experimental approach to these methods are currently being tested in the Purdue University Department of Veterinary Anatomy. Students are given the mastery standard, provided with numerous instructor and student-generated evaluation items. Students in this program no longer may receive a failing grade in the health professions courses. Until mastery is achieved, the student will receive an incomplete. If, after repeated attempts, he appears unable to pass, he should be counseled to consider other career options. In neither case does he even receive a failing grade or symbol. A significant outcome of the procedure is that learning is allowed to happen and the student is allowed to discover for himself his own level of excellence. (HS)

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Evaluation of Student Performance in the Health Professions*

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Evaluation is a much greater challenge than the relatively simple task of assigning grades. Currently most measurement practices are designed to produce easily defensible symbols of student's performance. Under the guise of objectivity have been hidden many an instructor's wish to avoid the dialogue with students generated by a technique of testing typically characterized by arbitrariness. With such emphasis upon correct, predetermined answers the prime purpose of learning becomes that of achieving a high test score, and the evaluation process becomes one of a game where points are tallied rather than an experience where learning is reinforced and deficiencies are diagnosed.

Evaluation methods resulting from the emphasis noted above are most often used in combination with norm-referenced as opposed to criterion-referenced procedures. Operating within a norm-referenced circumstance, the student finds that his performance is evaluated by direct comparison with his peers rather than by comparison with a predetermined performance standard. If students are shaped by the

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learning experiences they have while in the professional schools,as we believe they are. the consequence of an experience such as outlined above will be a student who is highly competitive, extrinsically motivated, possessing a less than positive attitude toward his peers, his instructors, and learning in general and in some cases, conditioned to accept less than a mastery level of performance from himself. Because of these related consequences, we believe procedures of evaluation derived from norm-referenced measurement are inadequate for accomplishing the major goals of evaluation and similarly are incompatible with the concepts of competency motivation (White, 1959 Nardine, 1971) and mastery learning. (Bloom, 1968 Block, 1971) Competency motivation and mastery learning go hand in hand. Success and satisfactory experiences while learning are essential to the nurturance of intrinsic motivation.

Our proposal is based upon the following assumption. Learning to learn is the most important outcome of professional and all formal education. The techniques of evaluation instructors use often set the pattern for the success or failure in our attainment of this goal. We suggest that a primary task of instruction is to assist the student to move from external motivation to internal motivation for learning and continuing to learn. Further, we propose these outcomes can best be facilitated by making two reforms in our evaluation prodedures - changing to a pass/not pass system of grading and using criterion-referenced instruments, as opposed to norm-referenced instruemnts, as a basis for evaluation.

The change to pass/not pass system of grading is a simple adjustment but it meets with widespread opposition. Many reasons for

opposition are voiced but primary among these concerns is the loss of discriminative symbols useful in later academic selections or professional certifications. This procedure, albeit of importance to some, is not one which should be permitted to jeopardize some extremely important educational outcomes in the wake of its accomplishment. For such determination is not the primary goal of instruction and subsequent evaluation. We believe this task of professional selection and certification can and should be done by agencies such as the national certifying boards. (Hullinger, 1972) Further, the goal of instruction and evaluation of student performance should be to insure that all students achieve mastery of the materials at pre-determined levels. By using evaluation more as a formative device rather than in a summative manner the instructor can assist the student in the diagnosis and correction of learning difficulties without penalizing the student in any way. (Bloom, Hastings, Madaus, 1971) With the freedom which comes from the depolarized, non-graded system the instructor can design his formative evaluations in cooperation with his students. He may even go so far as to provide them with the option of selecting the method whereby they would like to demonstrate their level of mastery performance to him. For example, one can provide for student interaction orally with the evaluator, student-developed measurement instruments, the traditional written instruments prepared by the evaluator or any other techniques the student and the evaluator may agree upon to establish the student's mastery performance.

Basic to this form of evaluation of instructional outcomes is the second of these proposals, the development of a criterion-referenced system. Using the norm-referenced system, each student is compared against the performance of members in his peer group. This technique

maximizes variations among students which, in the extremely selective health professions are primarily those of high aptitude or rate of learning, places a premium upon competition at the expense of cooperation, and permanently alters or shapes the young professional's attitude toward learning and his role as a learner. By shifting to criterion-referenced standards which are developed directly from specific behavioral objectives in the psychomotor, cognitive, and affective domains, one can set the minimum level of performance or required mastery level for student performance. (Block, 1971) In developing such a set of mastery objectives and subsequently basing all summative evaluation upon those objectives, one has provided a system whill will favor the development of peer cooperation and a system which will allow for the development of positive attitudes of the student toward himself as a learner and his learning in general, and of the instructor toward himself as a facilitator. Most importantly one may 'turn students on' for continuing their education and provide a framework for a more effective self-evaluation.

Such a shift to pass/not pass grading and mastery learning based upon the students' success in dealing with the subject matter are both significant, if not radical, suggestions for most of us. They call into question some of our fundamental assumptions regarding the learning process and the nature of what it is to be a student. (Rogers, 1969) But these are the basic issues which must be addressed if we are to assist our students in developing the intellectual and attitudinal dispositions required to conduct the self-evaluation necessary for success in the health professions. The classroom is the arena in which practice in self-evaluation should occur. There, models for its functioning can be developed with care and experimentation, and the

student can receive practice in evaluating his own performance. This concomitant development of a sense of competency while learning in all domains will enable the professional to fulfill a need for continuing his education within a framework of realistic self-evaluation.

In an experimental approach these methods are currently being tested in the Purdue University Department of Veterinary Anatomy. Students are given the mastery standard provided with specific learning objectives over all the subject matter, and provided with numerous instructor and student-generated evaluation items. All instruction is directed at the mastery of these objectives by every student. As it is currently designed, the summative examination for the course is being administered by a professor from a neighboring university. As an outside examiner he tests for the same mastery level over the same objectives. The pass/not pass task will be transferred to him as an external examiner. Potentially this may maximize further the role of the instructor as a facilitator versus a dual role he now plays as certifier and facilitator. In practice these roles conflict.

In summary, what is being proposed is not new in design but is new and exciting in application. We are suggesting that it no longer be possible for students to receive a failing grade in the health professions courses! Until mastery is achieved, the student will receive an incomplete. If after repeated attempts, he appears unable to pass, he should be counseled to consider other career options. In neither case does he ever receive a failing grade or symbol. Failure to interact with the student to bring him either to mastery or to a realization of his inability for achieving such mastery, is to fail him by our procedures when, in fact, it may be our procedures that have failed. (Rogers, 1969) To pass him without requiring mastery is malpractice. If there is repeated non-mastery, major responsibility

is placed upon the failure of the instructional system, not the failure of the student. His self-concept need not be adversely affected by the failure of such a system.

A significant outcome of the procedure is that learning is allowed to happen! (Rogers, 1969) The student is allowed to discover for himself his own level of excellence. Mastery is required of him but that is all. What he does beyond mastery is either on his own or with our assistance, but that in no way affects, in a negative manner, the performance of his peers.

Teaching is a full-time job· if you adopt this system of evaluation be prepared to work and work hard. In effect, the instructor pledges to fulfill a covenant with the student to take him to mastery and with some students that is a significant commitment of time and energy beyond that presently required. The current norm-referenced system in wide-spread use is much easier to implement by virtue of its familiarity to us all. But, as we have tried to show, in its pseudo-sophistication it leaves some vital outcomes unfulfilled. We believe many of the practices stemming from its application are often absurd, its assumptions are false, and, in fact, seem singularly antithetical to principles of human development, particularly cognitive and affective growth.

References

Block J. H. (Ed.). Mastery learning: Theory and practice. New York: Holt, Rinehart, & Winston, 1971.

Bloom, B. S. Learning for mastery. Evaluation Comment, Los Angeles: Center for the Study of Evaluation of Instructional Programs, University of California, 1:(2), 1968.

Bloom, B. S., Hastings, J. T. and Madaus, G. F. Formative and summative evaluation of student learning. New York: McGraw-Hill, 1970.

Hullinger, R. L. Judge and be judged ...On the anatomy of evaluation. Iowa State University Veterinarian, 34:2, 1972.

Rogers, C. R. Freedom to learn. Columbus, Ohio: Charles E. Merrill, 1969.

White, R. W. Motivation reconsidered: The concept of competence. Psychological Review, 66:297-333, 1959.